

## NASA HBCU/MSI TECHNOLOGY INFUSION ROAD TOUR

University of Nevada - Las Vegas January 10-12, 2017

Research and Educational Opportunities within the Navy and US Marine Corps

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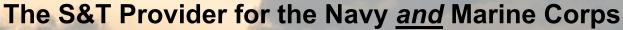
Presented by

Brian Shipley, SBIR/STTR Support

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#### The Office of Naval Research













- 4,000+ People
- 23 Locations
- \$2.1B / year
- >1,000 Partners



Discover

Develop

Deliver

Technological Advantage

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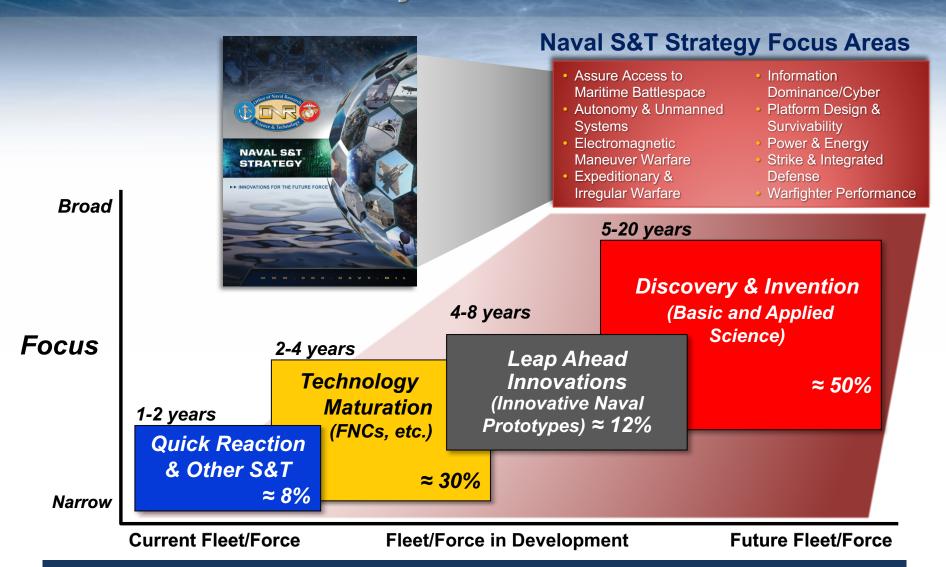
## Global & Fleet Engagement



We execute \$2B/year with the Naval S&T community in the US and 54 countries



## Warfighting Capabilities Enabled by S&T Investments



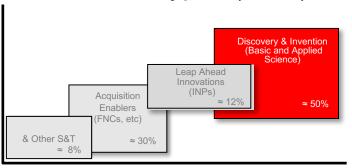
Portfolio is balanced across near, mid and long term S&T investments

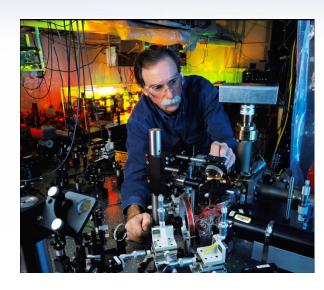


### **Discovery & Invention**

Discovery & Invention S&T is the essential foundation required for advanced technology 5-20 years out

- Basic Research and early Applied Research
- All research maps to the Naval S&T Strategic Plan
- Projects are the building blocks for Future Naval Capabilities (FNCs) and Innovative Naval Prototypes (INPs)





Dr. David Wineland won the 2012 Nobel Prize in Physics for his work in quantum computing.

#### Creativity Thrives in Discovery and Invention



# Discovery & Invention University Research Programs

- Multidisciplinary University Research Initiative (MURI)
  - Involves teams of researchers investigating high priority topics that intersect more than one traditional technical discipline
  - Awards = \$1.5M for three years
- Defense University Research Instrumentation Program (DURIP)
  - Supports university research infrastructure essential to high-quality naval-relevant research through purchase of high-cost research equipment
  - Awards from \$50K to \$1.5M
- Presidential Early Career Award for Scientists & Engineers (PECASE)
  - Recognizes and honors extraordinary achievements of young professionals at the outset of their independent research careers in S&T
  - Award is \$200K for five years
- Vannevar Bush Faculty Fellowship (VBFF)
  - Provides extensive, long-term financial support to distinguished university faculty and staff scientists and engineers to conduct unclassified, basic research on topics of interest to DoD
  - Max award is \$3M for five years

POC: Dr. Ellen Livingston, ellen.s.livingston@navy.mil



# Discovery & Invention Enterprise Research Programs

#### Basic Research Challenge (BRC)

- Competitively selects and funds promising research programs in new areas not addressed by the current basic research program
- Stimulates new, high-risk basic research projects in multidisciplinary and departmental collaborative efforts
- Average award is \$6M per topic over 4 years

#### Applied Research Challenge (ARC)

- Stimulates new applied research projects in areas not currently addressed by the departmental core applied research programs and explores feasibility of basic research with high risk and significant potential naval payoffs
- Each department receives \$4M over a 4 year period

#### Young Investigator Program (YIP)

- Supports academic science and engineering faculty who been on tenure track within the last five years and show exceptional promise for doing creative research
- Proposals may request up to \$170k per year for 3 years

POC: Reginald Williams, reginald.g.williams@navy.mil



The Education & Workforce portfolio raises awareness of naval career opportunities, attracts and nurtures the future talent pool, and fosters the continued development of the current naval science, technology, engineering, and mathematics (STEM) workforce

- Laboratory Workforce Initiatives
- STEM Initiatives



#### **Laboratory Workforce Initiatives**

- Science and Engineering Apprenticeship Program (SEAP)
  - Encourages high school students to pursue careers in STEM
  - Furthers students' education via mentoring by laboratory personnel; gets students to participate in ongoing research
  - Includes eight weeks under guidance of a mentor from one of 25 labs
  - POC: naval\_internships@navy.mil
  - Apply at http://seap.asee.org/
- Naval Research Enterprise Internship Program (NREIP)
  - Undergraduate or graduate research internship at one of nearly 30 naval laboratories or warfare centers
  - Ten week internship providing hands on experience and research skills
  - Interns receive stipends based on their class standing ranging from \$5,400- \$10,800
  - POC: naval\_internships@navy.mil
  - Apply at http://seap.asee.org/



#### **STEM Initiatives**

- Naval Science Awards Program (NSAP)
  - Encourages students to develop and retain interest in STEM
  - Recognizes accomplishments of eligible students at regional/state science and engineering fairs
  - POC: naval\_STEM@navy.mil
  - Apply at https://secure.onr.navy.mil/nsap/
- Science, Mathematics & Research for Transformation (SMART)
  - Opportunity for students pursuing a an undergraduate and graduate degree in STEM disciplines to receive full scholarship and be gainfully employed upon degree completion
  - SMART Scholars are paid students at a rate of \$25,000- \$38,000 depending on degree
  - POC: smart@asee.org
  - Apply at http://smart.asee.org/
- National Defense Science & Engineering Graduate Fellow Program (NDSEG)
  - Fellowships for study and research leading to doctoral degrees in science and technical areas
  - Students receive stipends for 12-month tenures



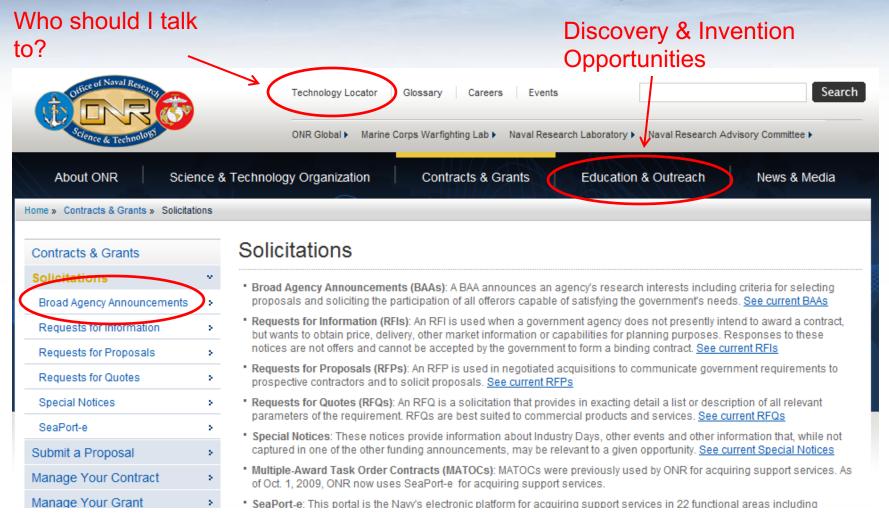
#### **STEM Initiatives**

- Summer Faculty Research
  - Science and engineering faculty from institutions of higher education
  - Opportunity to participate in research at naval labs for a 10 week period
  - Stipends ranging from \$1,400-\$1,900 per week
  - POC: daniel.vontilla.ctr@navy.mil
- Faculty Sabbatical Leave
  - Science and engineering faculty
  - Opportunity to participate in research at naval labs while on sabbatical
  - Monthly stipend making up the difference between salary and sabbatical leave pay
  - POC: daniel.vontilla.ctr@navy.mil



### **ONR Research Opportunities**

http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities.aspx





## Navy SBIR/STTR

#### navysbir.com

### What's unique to Navy?

- \$350M program with over 700 awards annually
- Acquisition driven process with strong technology pull
- Topic developed at the program and project level
- Competitive Phase I NTE \$225K, 1 YR POP
- Competitive Phase II NTE \$1.5M, 3 YR POP
- Eligibility for Subsequent Phase II NTE \$1.5M, 2 YR
- Commercialization support (https://navystp.com/)
  - SBIR/STTR transition Program (STP)
  - Forum for SBIR/STTR Transition (FST)
- Commercialization Readiness Program (CRP)
  - Accelerate the transition of technologies, products, and services developed under the SBIR program
  - Risk and manufacturing assessments; exercise and demonstration participation
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# SBIR/STTR Research Opportunities

http://www.acq.osd.mil/osbp/sbir/

BAA 17.1 and 17.A = over 400 topics





## Research Directorate Leadership



**Director of Research** 

Dr. Larry Schuette

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Deputy Director of Research

Craig A. Hughes craig.a.hughes@navy.mil



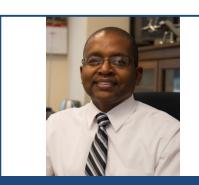
**Discovery & Invention** 

Dr. Joan Cleveland joan.cleveland@navy.mil



University Research Initiatives

Dr. Ellen Livingston ellen.s.livingston@navy.mil



**Enterprise Research** 

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Education & Workforce Development

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